June 2005

The Standards Forum and Standards Actions

Visit the Technical Standards Program Web Site at http://www.eh.doe.gov/techstds/

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Activity Summary

In Conversion–4

In Preparation–21

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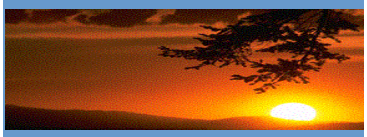


5-year Review Status

Proposed For Revision–6

Revision in Progress–4

Proposed for Reaffirmation–3

Reaffirmation in Progress -20

Cancellations Pending-11

Cancellations in Progress-0

Inside This Issue

Technical Standards Program Manager's Note

It's hard to believe that it's June already! With the advent of summer, comes the second installment in a series of four DOE Technical Standards Forums for the 2005 calendar year. Included in this edition are some interesting and timely articles. However, before I provide a quick synopsis of the articles, I would like to make a few important announcements.

First, I have created two new positions within the Technical Standards Program Office under my management. As of May 2005, I have appointed Norm Schwartz TSP Assistant Program Manager, and Satish Khanna TSP Publication Manager. Many of you have known Norm for quite a few years. He is very knowledgeable about the program and handles much of the day to day activities, including, but not limited to, project registration and maintenance of the TSIS database. Norm is an excellent "right-hand," and I have truly come to rely on his expertise. Satish Khanna has been with the program for a couple of years, and takes great pride in publishing the Standards Actions and Standards Forum. Because of his diligence and attention to detail, the publications look professional, and are released on schedule. I am glad to have both Norm and Satish on my team!

Jeff Feit

Second, we are bringing back the "Technical Standards Manager TSM) Spotlight" series. The TSM Spotlight was an informative segment discontinued a few years ago when EH-22 took over management of the Technical Standards Program. However, because of its potential "value-added", we are reinstating it beginning with the Forum's June 2005 edition. I've been working in the TSP for quite some time now, and I feel that the "Spotlight" was and will continue to be a valuable tool providing TSM insight from around the DOE complex. Here's how it works. On a quarterly basis, an enthusiastic TSM volunteer submits an article about his/her organization's involvement in standards development efforts. The Spotlight provides a unique perspective, and affords the DOE community the benefit of a TSM's unique experience anything from lessons learned using RevCom to information about specific standards. The Spotlight supports the notion that TSMs are the backbone of the Technical Standards Program, and as such, the DOE standards community can gain from their experiences. With that said, Dennis Kubicki (EH-24) is in the TSM Spotlight for June 2005. Dennis is the TSM for the Office of Environment, Safety and Health. Please take the time to read the article on Dennis. If you are a TSM, I hope that you will consider lending your thoughts on standards activities in future Forums. Please notify me to express an interest.

The Articles

In the wake of the events of September 11, 2001, Biometrics technologies are playing an increasingly important role in homeland security. In an article reprinted from the ANSI Reporter Autumn 2004, entitled *Biometrics Standards and the U.S.-Visit Program*, we come to understand the basics of this technology. Biometrics uses automated identification methods for screening visitors to the U.S. These methods include the verification of identity based on a person's physiological or behavioral characteristics. Because of biometrics, the immigration process is expected to become more efficient, and at the same time more foolproof. With this new technology comes the need for reliable standards in the design, operation, and maintenance of biometrics equipment. As such, the U.S. Department of Homeland Security recently announced the adoption of its first biometric facial recognition standard. This is probably only the first of of many adoptions to follow.

Continued on next page

In an article reprinted from the Defense Standardization Program Office Journal July/September 2004 entitled, *Standard Parts are the "Right Item" for the Warfighter*, we discover how standards play a key role in streamlining the design of parts and components shared by various military systems. The warfighter's weapon systems are complex in nature. These systems are made up of subsystems, which in turn include thousands of high quality, reliable parts and components. It makes sense that when weapon systems share standardized parts and components, as a whole, operational effectiveness is improved, resources are conserved, and costs are minimized.

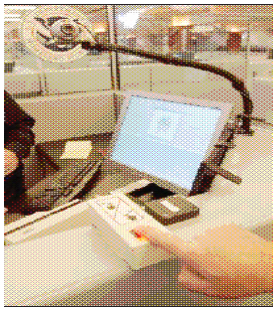
Tobin Oruch, the Engineering Standards Manager from the Los Alamos National Laboratory, provides an article entitled, *Who 'Ya Gonna Call'?* In his article, Tobin discusses the resources available to standards developers throughout the DOE complex. The Energy Facility Contractor's Group is comprised of DOE contractors whose purpose is to improve the cost effectiveness of DOE operations. Members of this group can be called upon to assist standards developers with authorship and/or standards review assignments.

The DOE Electrical Safety Handbook (DOE-HDBK-1092-2004) was recently revised and approved for publication in December 2004. In an article entitled, *DOE Revises Electrical Safety Handbook,* Pat Tran (EH-22), provides details regarding this handbook and its importance to DOE.

As a final note, I would like to add that all aspects of the TSP continue to function smoothly. With regard to the RevCom comment/review system, we continue to work toward making it a user-friendly tool. I want to thank all of you who have provided the valuable input necessary to make that happen. So, until next time, I wish you all a safe and enjoyable summer!

Biometrics Standards and the US-VISIT Program

This article has been reprinted with permission from the American National Standards Institute (ANSI). The article first appeared in the Autumn 2004 issue of the ANSI Reporter, the quarterly newsmagazine of the ANSI.



BIOMETRIC TECHNOLOGIES ARE FAST BECOMING THE FOUNDATIONS OF AN ARRAY OF HIGHLY SECURE IDENTIFICATION AND VERIFICATION SOLUTIONS.

WHEN THE UNITED STATES DEPARTMENT OF HOMELAND SECURITY LAUNCHED THE UNITED STATES VISITOR AND IMMIGRATION STATUS INDICATOR TECHNOLOGY (US-VISIT) PROGRAM IN JANUARY 2004, THE REACH OF BIOMETRIC TECHNOLOGIES TOOK ON A GLOBAL SCALE AND ASSUMED AN ENTIRELY NEW ROLE IN THE TRAVEL DOCUMENTATION REQUIREMENTS ASSOCIATED WITH U.S. BORDERS.

Biometric **t**echnologies consist of automated methods of identifying a person or verifying the identity of a person based upon recognition of a physiological or a behavioral characteristic. Physiological characteristics include hand, finger, facial, iris, and speech. Behavioral characteristics are traits that are learned or acquired, such as dynamic signature verification and keystroke dynamics.

US-VISIT encapsulates a range of security measures applied to all visitors to the United States that hold non-immigrant visas, regardless of country of origin. What makes this program unique is its use of biometric technology to expedite processing at borders, safeguard the personal privacy of visitors, ensure the integrity of the immigration system and facilitate legitimate travel and trade. By verifying the identity of visitors with visas at 115 airports and cruise ship terminals at 14 seaports, the US-VISIT program is a vital element of U.S. homeland security.

The process begins overseas, when a person applies for a visa at the U.S. consular office to travel to the U.S. The individual's biometrics (digital fingerscans and photographs) are collected and checked against a database of known criminals and suspected terrorists. When the visitor arrives at the port of entry, the same biometrics are used to verify the identity of the visa holder.

Public and private sector cooperation

As evidenced by the US-VISIT program, highly secure personal verification and identification solutions for many government and commercial applications have increased the need for national and international data interchange, interoperability, conformance and performance biometric standards developed in a timely fashion. The voluntary standards community has committed a great deal of resources and expertise to the development of standards and testing in the area of biometrics. Technical Committee M1, established by the International Committee for Information Technology Standards (INCITS), offers open-based biometrics solutions for Homeland Security and other government and commercial authentication applications. INCITS is an ANSI member and accredited standards developer. The INCITS M1 program of work includes biometric standards for data interchange formats, common file formats, application program interfaces, profiles, and performance testing and reporting.

The U.S. Department of Homeland Security recently announced the adoption of its first biometric facial recognition standard: ANSI INCITS 385-2004, *American National Standard for Information Technology— Face Recognition Format for Data Interchange*. INCITS 385 specifies definitions of photographic properties (environment, subject pose, focus, etc.), digital image attributes and a face interchange format for relevant applications, including

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human examination and computer automated face recognition. Homeland security professionals will use the standards as technical criteria upon which to design equipment such as cameras and software for facial recognition. The standard supports visual human facial comparison and computer automated comparisons for watch list checks and for computer identification and verification. It also facilitates the interchange of photographs across systems, and will assist in the future development of interoperable biometric applications.

"The Department, through the US-VISIT Program, has already moved forward with extensive work on biometrics and facial recognition standards. The adaptation of facial recognition standards is a first step in standardizing all types of biometrics which is essential for the success of Homeland Security programs," said Under Secretary for Border and Transportation Security Asa Hutchinson.

The National Technology Transfer and Advancement Act encourages government agencies to utilize the technical standards developed or adopted by voluntary consensus standards bodies, and continues to support effective partnerships between the public and private sectors. The Department of Homeland Security and its partners will continue to work on a regular basis with INCITS to revise these standards as biometric technology evolves□

Standard Parts Are the "Right Item" for the Warfighter

By David Moore, Robert Evans, and Samuel Merritt

This article has been reprinted with the permission from the Defense Standardization Program Office (DSPO). It was originally published in the DSPO Journal, July/September 2004.

In this DOE's version, only some graphics have been modified or omitted to suit our system capabilities without any text changes in the article.

More than ever before, the warfighter depends on complex military weapons systems to achieve mission success. Optimal system performance is essential if our warfighters—whether marines and soldiers in personnel carriers and tanks; airmen in fighters, bombers, helicopters, and cargo planes; or sailors aboard aircraft carriers and support ships—are to achieve our national defense objectives.

Today's complex systems are dependent on hundreds of subsystems, and those subsystems are dependent on thousands of parts and components, all of which must be of high quality and reliability to get the job done. Standard parts are integral to supporting the performance and missions of these systems and the warfighters that depend on them.

Standard **p**arts and their associated specifications are developed under the auspices of the Defense Standardization Program and represent a collaborative effort among the military departments, the Defense Logistics Agency, and the parts and equipment manufacturing industry to provide standard devices—the "right item"—of the highest quality and reliability that will function in the most demanding operational environments.

The Defense Supply Center Columbus (DSCC) has the role of Preparing Activity, Qualifying Activity, and Lead Standardization Activity in these key programs for electronic and hardware parts. The payoff from these engineering standardization efforts for the warfighter is significant. When our weapons systems share standardized components, less time is needed to repair them, because parts are usually on hand, and technicians spend less time figuring out how to solve Individual problems such as obsolescence. Operational effectiveness is improved, resources are conserved, and costs are avoided when equipment is kept in operation. Use of standard parts simplifies logistics support and enhances substitutability, because fewer parts must be procured, stocked, and tracked. This also translates into reducing the logistics footprint, because less space is needed for spares and fewer parts have to be transported to theater.

The standard parts programs were integral to the successful conduct of the conflicts in Afghanistan and Iraq in that the programs' focus is on designing standard parts that can be used to support hundreds of military systems in a variety of applications, including land, aerospace, and maritime. Today, standard parts are in use in all critical weapons systems, most notably, the following:

- Nuclear aircraft carriers (e.g., Nimitz class, *Enterprise*)
- Abrams tank and Bradley fighting vehicle
- F-117, F/A-18, F-15, F-16 and F-14 fighters
- B-1B, B-2 and B-52 bombers
- Tomahawk, TOW, and Patriot missiles
- Apache, Blackhawk, and Cobra helicopters
- KC-135 tankers, C-141, C-17, and C-5 cargo planes
- Airborne Warning and Control System and Global Hawk

In the last 12 months, four standard parts specification programs have provided significant support to the logistics pipeline that keeps our military warfighters going: microcircuits, semiconductors, high-reliability passive and electromechanical components, and hardware components.

Microcircuits

The microcircuit program consists of two military performance specifications—MIL-PRF-38535 (monolithic microcircuits) and MIL-PRF-38534 (hybrid microcircuits)—with more than 3,000 standard microcircuit drawings and associated qualified manufacturers lists (QML-38535 and QML-38534). The program provides standard complex microcircuits of the highest quality and reliability for the military customer. These programs represent a partnership effort between the military and industry. Today, 62 companies are on the QMLs, and more than 5,200 standard microcircuits are in the DoD Inventory system. Over 300 military systems depend on these

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standard microcircuits. In the last 12 months, the microcircuit programs generated considerable activity to support the military warfighter. Approximately 199,000 requisitions for standard microcircuits worth $2.3 million were received from our military customers for spares to keep critical military systems up and running.

Semiconductors

The semiconductor program is covered by MIL-PRF-19500 and its associated QML (QML-19500). Today, 20 companies are qualified to the program, and approximately 2,700 standard military grade semiconductors are in the inventory system. Critical items covered include transistors and diodes. Over 500 military systems depend on these standard semiconductors. In the last 12 months, for the semiconductor program, DSCC received approximately 540,000 requisitions representing $2.9 million in sales from our military customers for spare parts for repair and maintenance of military systems.

High-Reliability Passive and Electromechanical Components

The specifications programs for high-reliability passive electronic and electromechanical parts have a dramatic impact on military weapons systems. Among the standard military grade components covered by this program are resistors, capacitors, filters, relays, and connectors. Today, approximately 60 specification programs are covering these types of high-reliability parts. Four specification programs are highlighted for discussion: MIL-PRF-39016 (relays), MIL-PRF-39003 and MIL-PRF-39006 (tantalum capacitors), and MIL-DTL-38999 (circular connectors). These programs have associated qualified products lists (QPL-39016, QPL-39003, QPL-39006, and QPL-38999), more than 29 companies are qualified, and over 100,000 standard parts are available in the inventory system for military customers. Table 1 summarizes the impact of these programs on the military customer over the last 12 months.

Hardware Components

Also critical to the support of the warfighter were three hardware specification programs: MIL-DTL-27267 (hydraulic hoses), MIL-DTL-27272 (fittings), and MIL-DTL-25579 (hose assemblies), along with their associated QPLs (QPL-27267, QPL-27272, and QPL- 25579). These hardware components are used in demanding high-temperature fuel, hydraulic, pneumatic, and other fluid-handling applications. Eighteen companies are qualified to these programs, and approximately 2,700 standard parts for military applications are in the inventory. During the last 12 months, DSCC received more than 237,000 requisitions worth $3.9 million from our military customers to support fielded systems. Today some 200 military systems depend on these standard hardware components.

TABLE1. Estimated Requisitions, Sales, and Number of Systems Using High-Reliability Passive Electromechanical Components

Program	Requisitions	Sales	Military Systems
MIL-PRF-39016	>31,000	>$1 million	>250
MIL-PRF-39003	>48,000	>$340,000	>250
MIL-PRF-39006	>38,000	>$679,000	>300
MIL-DTL-38999	>176,000	>$5.8 million	>450

Summary

To achieve mission success, the warfighter must have military systems that are reliable and can meet demanding military environments. From the primary weapons system through its various subsystems and thousands of parts, it is essential that the right item be provided. The standard parts programs are a proven method for assisting the warfighter with achieving their mission. The parts covered in the specifications are of the highest quality and reliability. In addition, economies of scale are achieved in these specification programs in the procurement process by buying cost-effective, high-reliability, and quality parts in large quantities for use in hundreds of systems. Over the last year, the DSCC specification programs discussed in this article supported some 500 military systems and affected over 1.2 million requisitions and $16.9 million in sales□

About the Authors:

David Moore, Robert Evans, and Samuel Merritt work at the Defense Supply Center in Columbus, OH. Mr. Moore is the chief of the Document Standardization Unit. His organization has Preparing Activity responsibilities for a program that has more than 10,000 various standardization documents.

Mr. Evans is the chief of the Sourcing and Qualification Unit. His organization has Qualifying Activity responsibilities for a program that has 266 qualified products lists and qualified manufacturers lists.

Mr. Merritt is the chief of the Standardization Unit. His organization has Lead Standardization Activity responsibilities for 64 federal supply classes, as well as parts management and item reduction responsibilities.

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Technical Standards Manager Spotlight

Dennis Kubicki, P.E., Technical Standards Manager/ Fire Protection Engineer
US Department of Energy, Office of Environment, Safety & Health, Germantown, Maryland

D*ennis* ***K****ubicki of the DOE Headquarters' Office of Environment, Safety and Health (EH) is a native of Chicago, Illinois and currently lives in Frederick, Maryland. He attended the Illinois Institute of Technology, where he obtained his Bachelor's Degree in Fire Protection Engineering in 1974. Dennis holds a Master's Degree in Business Administration from the University of Maryland and a Master's Degree in Safety from the University of Southern California. He is currently enrolled at the University of Maryland where he is pursuing his Master's Degree in History. (Dennis intends to teach History, his lifelong passion, when he retires in 2007.)*

Dennis has held a number of fire protection engineering positions since graduation, including those with the Maryland State Fire Marshal's Office, the U.S. General Services Administration, NASA, and the U.S. Nuclear Regulatory Commission. He has been with the Department of Energy since 1990 where he has been responsible for developing fire protection policy and standards, performing oversight of contractor fire safety programs, implementing fire safety research, developing training courses, and providing fire protection technical assistance to other Departmental entities. Dennis has authored a number of published articles on diverse fire safety topics and was editor of DOE's fire protection newsletter "DOE-Nuts." From its inception until the summer of 2000, he was Chairman of the DOE Fire Safety Committee.

Dennis Kubicki

When George Detsis, EH's former Technical Standards Manager (TSM), decided to pursue other interests, Dennis welcomed the opportunity to assume the responsibilities of the position. As he recently stated to the editor of The Standards Forum: *"I believe that a functionally efficient and technically diverse standards program within the Department is essential for maintaining comprehensive and effective site safety and health programs."*

In the nine months since becoming the TSM, Dennis has had an opportunity to learn much about the Technical Standards Program (TSP), although he admits that he is still a relative novice compared to the TSP staff. Nevertheless, he recognizes several distinct challenges that face the Program. One is to maintain a high level of participation in the standards development process by both TSMs and Subject Matter Experts (SMEs). (He has noted that, on a number of recent standards actions, SMEs have not always become involved, despite the relevance of the actions to their particular discipline.)

A related issue is to maintain continuing management support for the Program. This is particularly important in this era of reduced budgets, downsizing, outsourcing, and the changing face of DOE.

More recently, Dennis has noted that rulemaking efforts within the Department may potentially impact the applicability of DOE standards because the draft regulations do not explicitly incorporate them as is currently done within DOE Orders. Additionally, within the context of industry fire safety standards, such as those promulgated by the National Fire Protection Association, evolving technology and changing methodologies (such as performance-based design) present the DOE standards and fire protection communities with the challenge of being current.

Dennis entered the Program in the midst of its adoption of the REVCOM software. While he had some initial challenges acquiring the needed computer skills, he is convinced that REVCOM for TSP is far superior to the antiquated process for standards coordination in the past.

On a personal note, Dennis is involved with a number of spare time activities. He is a volunteer with the Saint Vincent DePaul Society, a "Level Walker" on the C&O Canal, and a historic interpreter at Fort Frederick State Park. Dennis plays two musical instruments and is currently learning to play the piano. He is re-enactor in the French and Indian War, Revolutionary War and Civil War periods.

Dennis is looking forward to working with the TSP staff and with other TSMs in the future in furthering the goals of the Program□

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Who 'Ya Gonna Call'?

Technical Expertise in the DOE Contractor Community

By Tobin Oruch, Los Alamos National Laboratory (LANL)

Within the Department of Energy (DOE) Technical Standards Program (TSP), the production of Standards involves the contribution of prime contractor subject matter experts (SMEs). Sometimes contractors help with authorship during preparation, but they always perform reviews on REVCOM for TSP during coordination. DOE authors oversee the former, while Technical Standards Managers (TSMs) in the contractor community are responsible for the latter.

Tobin Oruch

Given this, both of these groups and all other Forum readers should be aware of several SME resources in the DOE contractor community under the auspices of the Energy Facility Contractors Group (EFCOG). With the constant turnover of personnel, a better understanding of the systems in place to focus SME efforts is important; newcomers cannot rely only on personal relationships and knowledge.

For those unfamiliar with EFCOG, here is a little about the organization taken directly from their website (http://efcog.org):

The EFCOG is a volunteer organization, directed by senior level executives from DOE contractors, sustained by working level personnel from member contractors, and supported and funded by DOE.

EFCOG was formed in 1991 by a group of DOE contractors who decided to work together to improve the cost effectiveness of DOE operations by promoting, coordinating, and facilitating active exchange of successful programs, practices, procedures, lessons learned, and other pertinent information of common interest, which have been effectively utilized by Maintenance & Operations (M&O) contractors, Maintenance & Inspection (M&I) contractors, and laboratories. EFCOG provides for the exchange of information useful to the membership in enhancing excellence in operations. This includes, but is not limited to, lessons learned, best management practices, industry benchmarks/standards, appraisal findings/resolutions, advances in technical and managerial areas, and new ideas/practices.

EFCOG promotes a professional and cooperative relationship with the Department of Energy and other organizations that may be involved or can assist in the quest for operational excellence.

Much of the day-to-day work of EFCOG takes place in the working groups. There are working groups on Acquisition Management, Energy Efficiency, Engineering Practices, Integrated Safety Management, Infrastructure Management, Price Anderson Amendment Act (PAAA), Project Management, and Safety Analysis. Each of these groups works actively with DOE on a number of initiatives in a manner similar to the DOE Topical Committees. While the EFCOG groups are not led by DOE as are the Topical Groups/ Committees, every group is nevertheless very interested in building stronger ties and working together more closely with DOE on issues of mutual interest. Each group has a chairperson who serves as the point contact for such interaction. The EFCOG website lists those chairs.

Several of the working groups have specific interest in the DOE Technical Standards. The Integrated Safety Management Working Group, for example, has an Occupational Safety & Health Subgroup (and a Rad Protection Task Group within that). A recent search for "radiation" on TSP's Approved Standards webpage yielded 269 hits – an impressive number of documents the EFCOG group might want to work with.

The Safety Analysis Working Group is concerned with accident analysis, chemical safety, and safety basis. DOE has several related standards, especially in the 3001- 4000 series.

The Infrastructure Management Working Group has a Maintenance Subgroup; DOE has maintenance-related standards. The parallels are numerous.

The final and perhaps strongest linkage between EFCOG and the TSP is with EFCOG's Engineering Practices Working Group (EPWOG). It is engineering, more than any other function, which specifies the requirements for the design, construction, and operability of new facilities and systems, and modifications to those facilities and systems. And engineers doing DOE work rely heavily on DOE Standards to fill the voids that exist in national codes and standards. Further evidence shows that several of the contractor TSMs are in engineering roles – and in EPWOG. In fact, EPWOG has three subgroups: Fire Protection, Configuration Management, and Engineering Standards. Each of these subgroups is very interested in the Technical Standards that relate to their scope.

Here's where the TSMs and authors might get interested.

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EPWOG maintains listings of technical SMEs at many major DOE sites. These people are a great starting point for determining Standards review assignments and, potentially, authorship assistance. The listings can be accessed by the "SME Link" button on the EPWOG homepage, which is http://efcog.org/workgroups/epwog/index.htm.

The SME Link brings up the following table of SME categories:

Engineering - General		
Architectural	Finite Element Analysis	Pressure Protection
Backfit/Design Adequacy	Fire	Research & Development Eng (R&D)
Blast Resistant Design/Penetration Mechanics	Geology	Rad Protection Eng
CAD Manager	Geotech	Reliability Eng (RAM)
CAD Standards	Gloveboxes (Gbx)	Remote Handling and/or Viewing
Chemical/Process Eng (ChE)	Geographic Information Systems (GIS)	Roofing
Chief Engineer (ChEng)	HEPAs	Safety Eng
Civil (CE)	Hoisting And Rigging	Security
Commissioning (Cx)	HVAC/Filtration	Seismic Analyst
Computational Fluid Dynamics	I&C	Seismology
Conduct of Eng (CoE)	Industrial Eng	Site Planning
Configuration Management (CM)	Lightning Protection	Structural
Construction Eng	Machine Design	(Supplier) Quality Eng
Cost Eng	Maintenance Eng	Surveying
Criticality (Safety) Eng	Material Handling	Sustainable Design (SD)
Deactivation, Decommissioning (D&D)	Materials/ Metallurgical Eng	System Eng (SE)
Design Authority (DA)	Mechanical	SystemS Eng (SsE)
Design Eng (DE)	Mining	Telecommunications
Electrical (EE)	Miscellaneous SMEs	Utilities/Exterior Infrastructure
Energy Management	Nuclear Eng	Value Management
Eng Standards Program	Nuclear Safety Design Eng	Waste
Environmental Eng	Piping/Pumps/Valves/Vessels	Welding
Explosives Safety	Plant or Component Eng	

Within any given category, the webpage lists selected SMEs, including email and phone number. It may also have weblinks to associated non-government societies and government standards.

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As an example, for Configuration Management, the SME webpage looks like this:

PRIMARY			ALTERNATE		
Member: Responsibility (AHJ, POC, or SME): Name, Title	**Phone**	**E-mail**	**E-mail**	**Name, Title**	**Phone**
Configuration Management (CM)	Person most familiar with practices for maintaining the technical baseline of a facility (design basis, design outputs) through change control and records management. Links: **EPWOG CM Subgroup webpage (DOE)** CM Benchmarking Group (nuclear) Institute of Configuration Management DOE-STD-1073-93-Pt. 1; DOE Standard Guide for Operational Configuration Management Program, Part 1 DOE-STD-1073-93-Pt. 1; DOE Standard Guide for Operational Configuration Management Program, Part 2 DOE-STD-3024-98; DOE Standard Content of System Design Descriptions				
ANL-W: Debby Tate, Mgr, Dig Cntrl & Info Sys	208-533-7088	deborah.tate@anlw.anl.gov			
BN: POC: R. T. Brock	702-295-0833	brockrt@nv.doe.gov	potterjj@nv.doe.gov	Jay Potter, CM Ld Eng	702-295-1952
BN: SME: Eric Amarescu	702-295-1952	amaresej@nv.doe.gov			
BNL: POC Paul Blacher, ME	631-344-5287	blacher@bnl.gov			
CH2: SME: Ernie Hamm, Engineering Discipline Lead	509-373-2189	Earnst_R_Hamm@rl.gov	Michael_A_Fish@rl.gov	Michael Fish	509-372-3657
FH: POC: Charles Kronvall, System Engineer Program Mgr	509-376-9601	Charles_M_Kronvall@rl.gov	robert_d_bromm@rl.gov	FH: POC Robert Bromm, Mgr., ME.	509-372-2949
INEEL: POC: B. Chuck McConnel	208-526-0858	mccobc@inel.gov	johnja@inel.gov	Jim Johnesee	208-526-1345
LANL: POC: Tobin Oruch	505-665-8475	oruch@lanl.gov	ggrewal@lanl.gov	SME: Gurinder Grewal, Eng Div Chief Eng	505-667-3667

In conclusion, it is hoped that, with an understanding of these SME listings and the EFCOG working groups, those of us involved in the DOE Technical Standards Program can perform our tasks more efficiently and thoroughly□

Tobin Oruch is the Engineering Standards Manager at the Los Alamos National Laboratory. He founded and holds an elected office in the Engineering Standards and Engineering Practices groups of EFCOG, the DOE Energy Facility Contractors Group (EFCOG.org). He can be reached at 505-665-8475 or oruch@lanl.gov.

Continued on next page

DOE Revises Electrical Safety Handbook

By Pat Tran, Office of Nuclear & Facility Safety

The latest revision to the Department of Energy (DOE) Electrical Safety Handbook, DOE-HDBK-1092-2004, was formally approved for publication on December 14, 2004. It is now available on the DOE Technical Standards website as an approved handbook at http:// www.eh.doe.gov/techstds/standard/recappts.htm. This is the fourth revision to the document that was first published as the DOE Electrical Safety Manual in 1989. In 1990, it first appeared as DOE Electrical Safety Guidelines. In 1993, it appeared as DOE Electrical Safety Handbook and in 1998 as a DOE technical standard document under the auspices of the DOE Technical Standard Program.

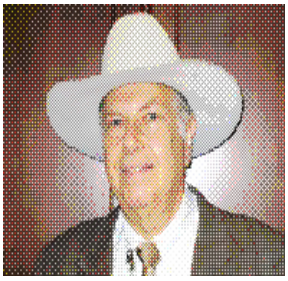
Pat Tran

The handbook consolidates applicable Occupational Safety Health Administration (OSHA) and national consensus standards such as the National Electrical Code (NEC) and the National Fire Protection Standard (NFPA-70E) along with more stringent requirements deemed necessary to adequately control electrical work within the DOE. Examples of DOE specific provisions for which there are no national consensus requirements, include chapters on research and development. The most significant changes to the 2004 edition of the handbook appear in the chapter addressing electrical safety during excavation.

While the DOE Electrical Safety Handbook is a best practices document, most of its content, such as the OSHA, NEC and NFPA -70E are mandatory within DOE. In addition, many DOE organizations have, on their own initiative, adopted and referenced the handbook as mandatory to ensure safety and proper electrical work at their facilities.

Whether mandatory or not, the handbook is and will continue to be the document by which the excellence of DOE electrical safety program is judged. Questions or concerns about the content of the handbook may be directed to Mr. Pat Tran, EH-22 at phone: 301-903-5638, fax: 301-903-6172 and e-mail: pat.tran@eh.doe.gov□

Topical Committee Developments



M. Norman Schwartz

Chemical Workshop Generates New Projects for 2005

By Billy T. Lee, Office of Worker Protection Policy and Programs

The Chemical Safety Topical Committee (CSTC) held its Seventh Annual Joint Energy Federal Contractors Group (EFCOG)/Department of Energy (DOE) Chemical Management Workshop, March 8-10, in the DOE Forrestal building's main auditorium.

This year's theme, "Perspectives on Chemical Hazard Identification," focused on the recognition and management of chemical-related hazards in government and industrial facilities. The Workshop attracted more than 160 participants, either in person or by telecast from sixteen sites throughout the Complex. Russell Shearer, Principal DOE Deputy Assistant Secretary for Environment, Safety and Health, provided the DOE Corporate welcome. Thomas Stevens, Senior Vice President for the Federal Group and EFCOG Chairman, provided the EFCOG Sponsor's corporate welcome. R. Shearer emphasized the need for lessons learned to avoid recurrence of accidents. He acknowledged the role of CSTC in helping government and private industry communicate and share safety practices in a cooperative and collaborative way to promote continuous improvements in chemical safety. Dr. William Von Holle of the Defense Nuclear Facilities Safety Board noted that chemical safety often overlaps with nuclear safety. He spoke about the importance of having technically qualified people for hazard identification and management in all areas including research and development.

Twenty speakers and panelists from Federal Agencies and the private sector offered insight into the management of toxic chemicals in both an industrial and research setting during the three days of presentations and training. Agencies with a role in managing chemicals that participated in the workshop included: the U.S. Occupational Safety and Health Administration, the U.S. Chemical Safety and Hazard Investigation Board, the U.S. National Institute of Environmental Health Sciences, the National Nanotechnology Coordination Office of the National Science and Technology Council, the Center for Chemical Process Safety, and the Defense Nuclear Facilities Safety Board. In addition, many organizations from DOE Headquarters and the field sites presented their perspectives on chemical hazards.

Continued on next page

Topics addressed included the following:

- Hazard recognition,
- Tools for preventing reaction chemical incidents,
- Ways for assessing security risk vulnerability at chemical facilities,
- Potential and known hazards of nanomaterials, and
- New CSTC projects for 2005.

Speakers presented methodologies and tools for identifying and managing chemical hazards as well as program accomplishments, best practices, and lessons learned. As a result, participants left the Workshop with a better understanding of how to address their own chemical hazards and risks. The Workshop also introduced attendees to nanotechnology and the environmental, health, and safety implications of this emerging field.

The Workshop featured summary reports of CSTC projects completed in the previous year in addition to presentations and new project identification:

- Recommendations for addressing recurring chemical incidents at DOE,
- Volume 3, *Consolidated Chemical User Safety and Health Requirements*, of the *DOE Chemical Management Handbook,* DOE HDBK-1139/3-2004,
- Methods for addressing the hazards of time sensitive chemicals,
- Case studies on chemical exposures during closure activities, and
- Perspectives on chemical hazard characterization practices.

During open discussion, three new projects were identified. To address the new projects elected chairpersons supported by DOE Headquarters representatives from EH-52's Chemical Safety Group selected teams of DOE and EFCOG volunteers.

Participation in any of these projects is encouraged, requiring only that the volunteer have a role in some aspect of the management and oversight of chemical safety programs at a DOE facility or laboratory. The new CTSC projects identified for 2005 and the contact persons are:

- Management guide for reactive and incompatible chemicals.
  Helena Whyte – (505-667-2854), helenaw@lanl.gov,
- Development of a guide for life cycle management of chemicals.
  James Morgan – (803-557-4668), james.morgan@srs.gov,
- Update and maintenance of DOE chemical safety documents.
  Dave Quigley – (865-576-6920), quigleydr@doe.gov.

For more information about the chemical management initiative go to the EH web site at http://www.eh.doe.gov/chem_safety/. CD's of the workshop presentations and videotapes of the Workshop are available by request to Dan Marsick at dan.marsick@eh.doe.gov. Participation on any of the above projects can be arranged by contacting Ron Eimer at ron.eimer@eh.doe.gov□

Notes on Metrology/Accreditation Committee March 2005 Meeting

By Thomas F. Wunsch, Ph.D., Manager Primary Standards Laboratory, Sandia National Laboratories

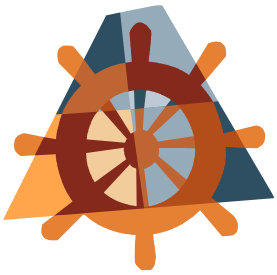
The 2005 Annual Department of Energy (DOE) Technical Standards Program Meeting of the Joint Committee on Metrology and Accreditation was held from March 8-10, 2005 in Livermore, CA. The meeting was hosted by Bob Pilkey of Sandia National Laboratories. A total of 26 individuals attended the 2 1/2 day meeting representing DOE standards and calibration laboratories, the Livermore National Nuclear Security Administration (NNSA) Site Office, and the US Department of Defense. The meeting, conducted annually, focused on cooperation between the calibration programs of the DOE, adoption of national and international quality standards, support for accreditation activities, and efficiency through cooperation in solving common issues.

The first day of the meeting consisted primarily of presentations and discussion with invited speakers. Dan Nelson, Group Leader of the National Ignition Facility (NIF) Precision Survey Group, Lawrence Livermore Laboratory, provided a description of the complex surveying measurements required for alignment of the placement of key NIF equipment, alignment of the laser beam lines, and key specifications required of the NIF facility. The group toured the NIF facility the afternoon of the second day of the meeting. Darlene Diven and Tom Diven of the Lockheed Martin - Sunnyvale calibration facility, provided an explanation of their process for supporting calibration needs at the Sandia Livermore facility. They answered numerous questions about their operations, accreditation experiences, transportation issues, and technical capabilities. Joseph Ceremuga, a staff member at Sandia, provided a technical presentation on the metrology necessary to assure qualification of components produced using LIGA technology, a meso-scale manufacturing process for components being developed in support of NNSA programs. J. Ceremuga explained the details of LIGA

Continued on next page

processing and the specialized equipment necessary for precision measurements of LIGA components. He provided an overview of custom software he developed to analyze data collected on a LIGA manufactured spring. Arman Hovekemian, Chief of the Measurement Science Directorate, Naval Surface Warfare Center in Corona, CA, presented an excellent overview of the U.S. Navy standards and calibration programs. A. Hovekemian is a board member of the National Cooperation for Laboratory Accreditation (NACLA). He fielded many questions on the status of NACLA, it's mission of assessing the performance of accreditation bodies, and future plans for the organization. A. Hovekemian also offered to host a future meeting of the joint topical committee.

The second day of the meeting consisted primarily of lab reports and roundtable discussion of issues that face DOE calibration laboratories. The lab reports will be posted on the committee website at a later date. The selection of the topical committee members whose term will run through 2006 was confirmed during a short business meeting of the committee. Dr. Thomas Wunsch of Sandia will remain as chair of the steering committee. The 2006 annual meeting will be hosted by Jim Allred of the Idaho National Engineering and Environmental Laboratory. The final half day of the meeting was devoted to specific issues of concern to the DOE/NNSA standards and calibration program. Nancy Dhooge, Sandia National Laboratories, hosted a workshop on the process of approval of third party suppliers of calibration services. Dr. Mary Jane Hicks, also of Sandia, discussed the development of requirements and changes in process identified through lean 6-sigma methods that will be used to develop new calibration laboratory equipment management software. The software will support several calibration programs including the NNSA Primary Standards Laboratory□



Welcome Aboard the TSMC!

(By M. Norman Schwartz, Office of Nuclear & Facility Safety Policy)

The Technical Standards Managers (TSMs) are the backbone of the DOE Technical Standards Program! These knowledgeable individuals serve as their organization's standards point of contact and contribute to the coordination of Department-wide TSP activities. A great deal of their work time is spent in assuring that standards activities take place in a manner that will promote safe, economical, and efficient operations locally and across the DOE complex.

With nearly 90 active and mobile people involved in TSM activities, it can be a daunting task just to keep up with the retirements and reassignments affecting the TSM roster. This "Welcome Aboard" feature is designed to introduce you to the new TSMs and help you keep abreast of the rapidly changing make-up of the Technical Standards Managers' Committee (TSMC).

The following are the recent changes in the membership list.

Douglas M. (Doug) Minnema (Replaces Mohammed S. (Alam)
Mozumder as TSM for NNSA)
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Jerry W. Robertson (Replaces Keith A. Bradley as TSM)
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E-mail: robertsonjw1@bechteljacobs.org

Continued on next page

STANDARDS ACTIONS

1.0 DOE STANDARDS ACTIONS

The complete list of all DOE Technical Standards projects and their status is available on the Technical Standards Program (TSP) web page at http://www.eh.doe.gov/techstds/. To access these standards, go to our web page, click on "DOE Technical Standards," then choose Projects, Approved Standards, Recently Approved Standards, or Drafts for Review, as appropriate, on the left frame of the page.

1.1 New Projects and DOE Technical Standards in Revision

The following DOE Technical Standards revision project was submitted on May 19, 2005:

Chemical Management, Volume 1, DOE-HDBK-1139/1-2000, Project No. SAFT-0104. Contact Daniel J. Marsick, EH-52, Phone: 301-903-3954, fax: 301-903-7773 and e-mail: dan.marsick@eh.doe.gov.

1.2 DOE Technical Standards Posted in RevCom for TSP

Your Technical Standards Manager (TSM) will initiate requests for specific reviewers to comment on these drafts. The list of TSMs can be found at: http://www.tis.eh.doe/techstds/contact/stdmgrs.html. The full test of these documents are available for comment at RevCom for TSP http://standards.doe.gov/login.jsp located on the TSP website.

The following entry was received on May 06, 2005:

Management of Items and Areas Containing Low Levels of Beryllium, Project No. SAFT-0103. Contact David J. Weitzman, EH-52, phone: 301-903-5401, fax: 301-903-7773, e-mail: david.weitzman@eh.doe.gov.

1.3 DOE Technical Standards in Reaffirmation

The following three standards were announced by April 20, 2005, memorandum and the fourth one by May 9, 2005, memorandum as reaffirmed:

- *Safety of Magnetic Fusion Facilities: Requirements,* DOE-STD-6002-96
- *Safety of Magnetic Fusion Facilities – Guidance,* DOE-STD-6003-96
- *Supplementary Guidance and Design Experience for DOE Fusion Safety Standards DOE-STD-6002-96 and DOE-STD-6003-96,* DOE-HDBK-6004-99
- *Radiological Safety Training for Uranium Facilities,* DOE-HDBK-1113-1998

1.4 DOE Technical Standards Change Notices

No entry was received in May 2005.

1.5 DOE Technical Standards Recently Published

The following DOE standard was published in May, 2005 and posted on the TSP website:

Beryllium-Associated Worker Registry Data Collection and Management Guidance, DOE-STD-1187-2005, May 10, 2005.

2.0 NON-GOVERNMENT STANDARDS ACTIONS

2.1 American National Standards Institute

American National Standards Institute (ANSI) publishes coordination activities of non-Government standards (NGS) weekly in ANSI Standards Action. Recent electronic copies are available on the ANSI Web Site at: http://www.ansi.org/news_publications/periodicals/standards_action/standards_action.aspx?menuid=7. Refer to ANSI Standards Action for the complete list of changes and new publications, standards developing organizations, and information about submitting comments. Electronic delivery of selected documents is available through ANSI at: http://webstore.ansi.org/ansidocstore/default.asp.

ANSI also lists standards actions on new and revised American National Standards and International Standards Organization (ISO) Standards.

2.2 American Society of Mechanical Engineers (ASME)

ASME lists recently published standards on the ASME web site at: http://www.asme.org/codes/newdocuments.html. Refer to the ASME web site for the complete list of changes and new publications, standards developing organizations, and information about submitting comments.

ASME maintains monthly updates of drafted new standards as well as revised drafts of current standards, to meet new requirements at: http://cstools.asme.org/csconnect/PublicReviewpage.cfm.

A respective "comment period end" date follows each listed document..

2.3 ASTM International

The listing of approved ASTM standards actions during 2005 is accessible at: http://www.astm.org/SNEWS/MAY_2005/acta_may05.html. Refer to the ASTM web site for the complete list of new publications.

Continued on next page

2.4 American Nuclear Society (ANS)

The ANS "What's New" web page at: http://www.ans.org/standards/new/ lists recently initiated projects, as well as ANS standards approved in recent years.

2.5 National Fire Protection Association (NFPA)

The May 2005 NFPA News lists NFPA standards available for comment, newly proposed standards, newly issued standards, and the call for members on committees. View it at: http://www.nfpa.org/assets/files/PDF/NFPA%20News/nfpanews0505.pdf.

THE STANDARDS FORUM & STANDARDS ACTIONS

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Questions or Comments: If you have any questions or comments, please contact Jeff Feit, EH-22, Manager, DOE Technical Standards Program Office (TSPO), Phone: 301-903-0471, Fax: 301-903-6172, e-mail: Jeffrey.feit@eh.doe.gov